TOKAR', M.I., inzh.

Packing of joints of nonpressure sewer-pipes. Vod. i san. tekh. no.11:34-35 N '65. (MIRA 18:12)

TOKAR, Peter

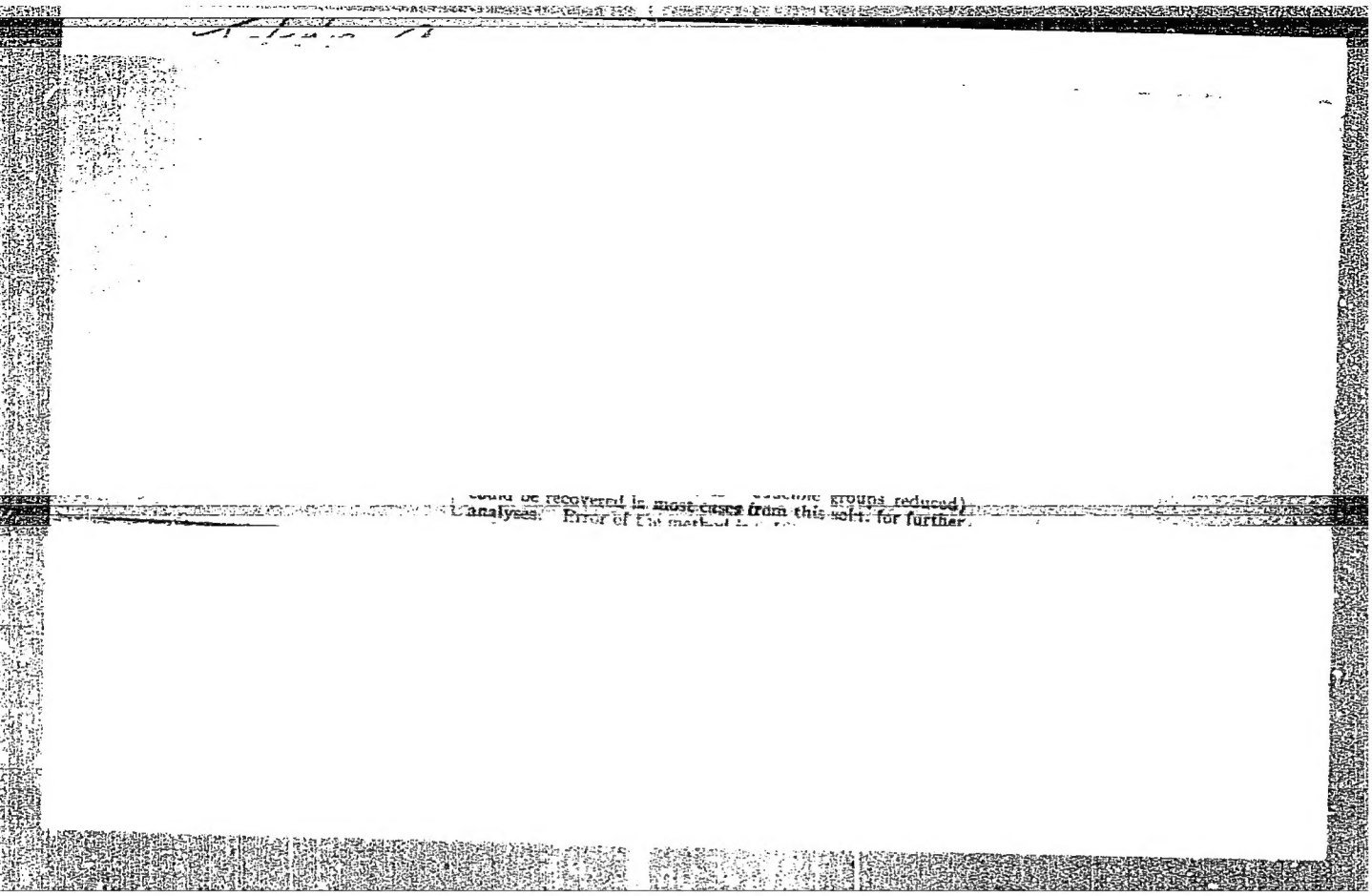
Let us utilize better values not yet found in inventions! Musz elet 16 no.15:6 Jl '61.

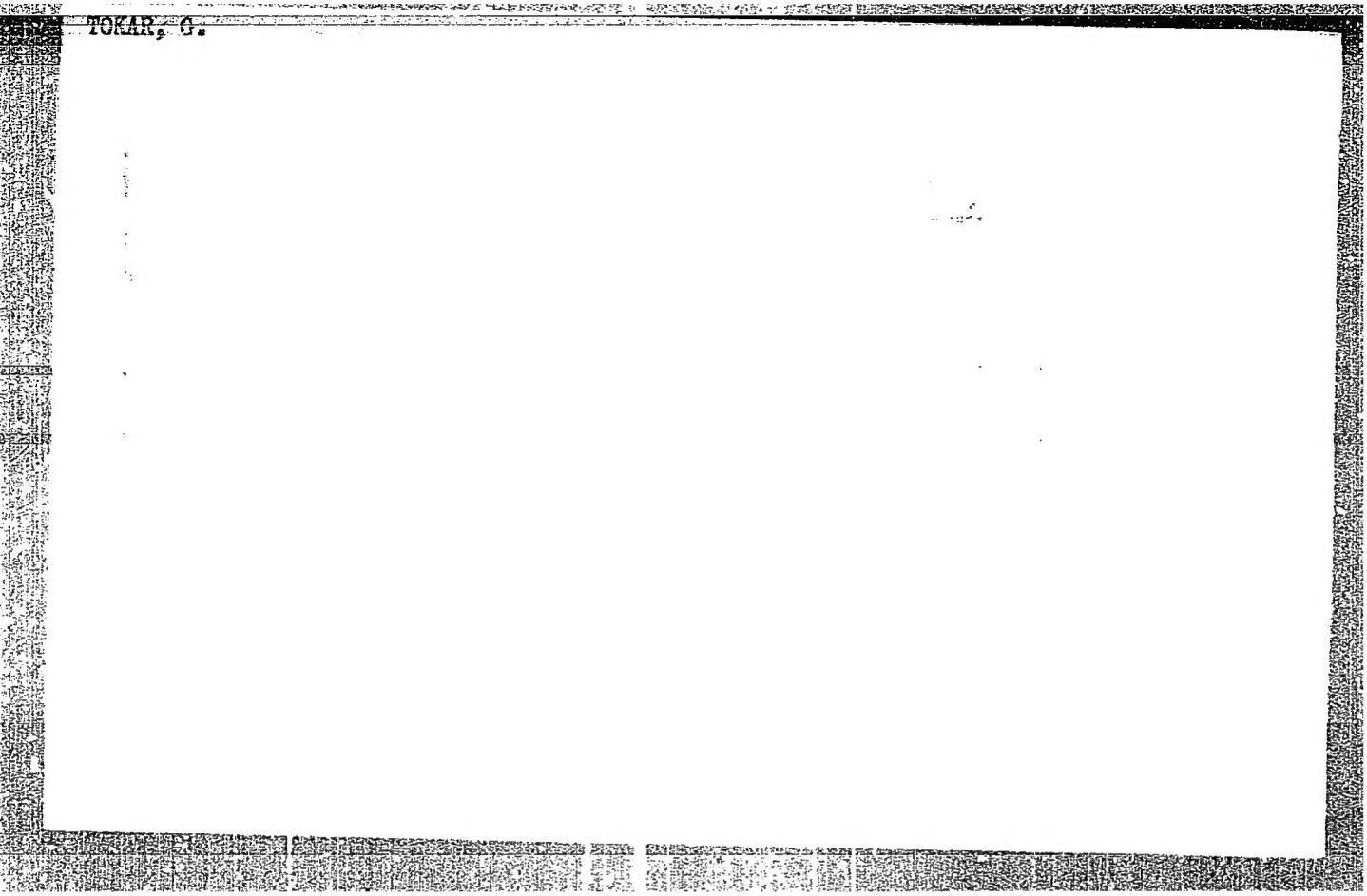
(Industrial management)

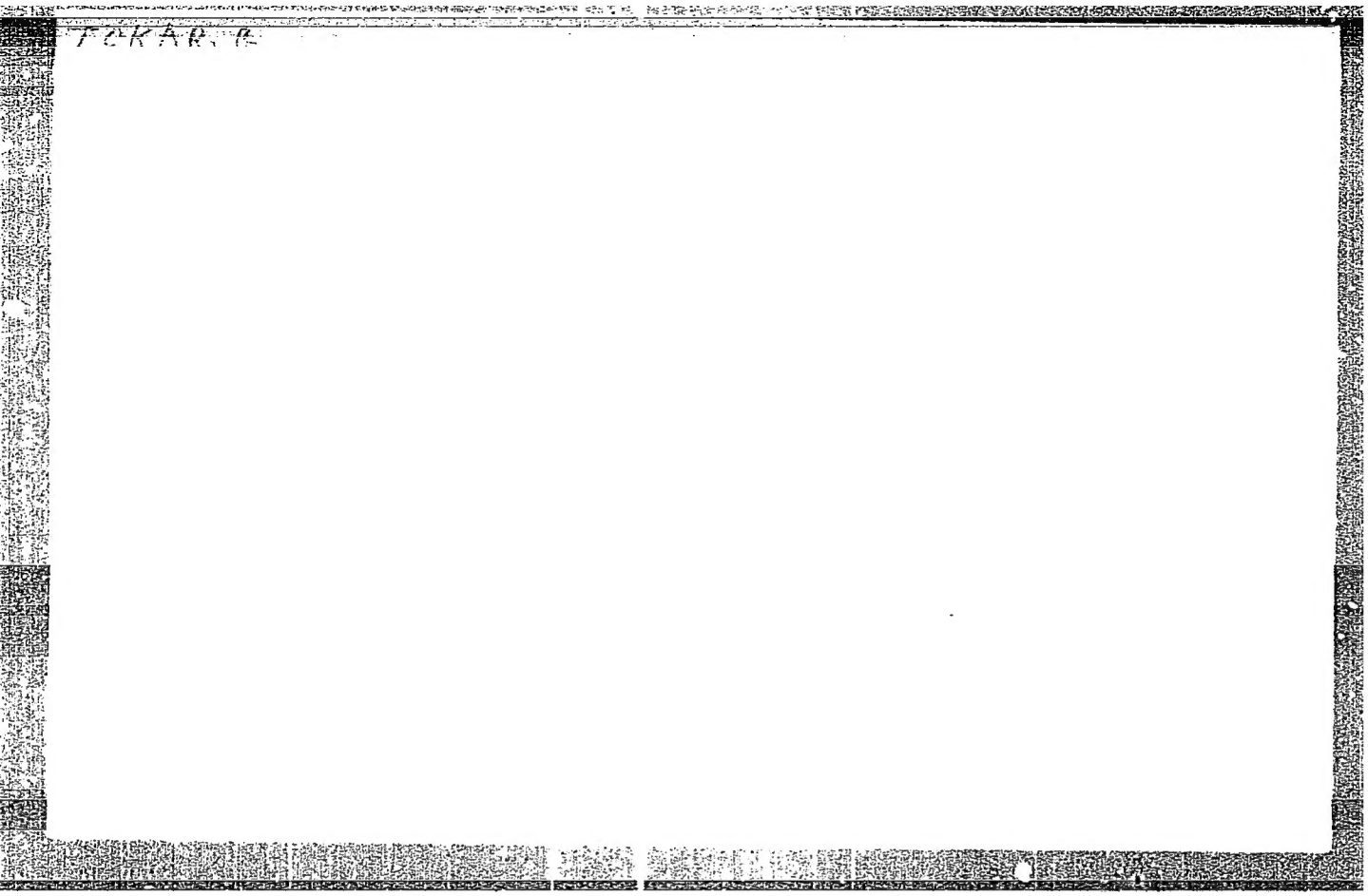
TOKAR', R.A.

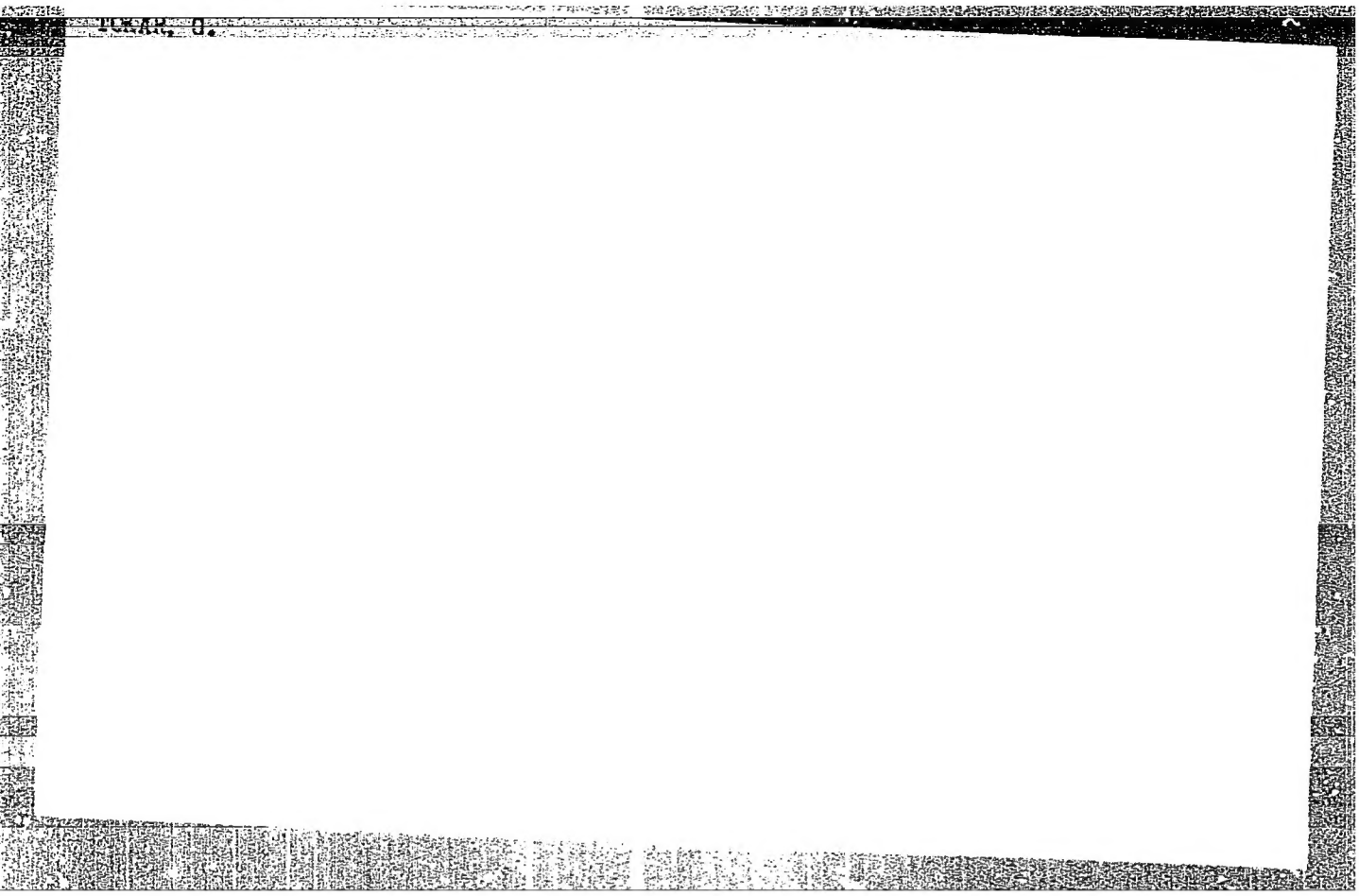
Calculating deformations in foundations. Trudy NII osn.i fund. no.30:5-38 '56. (MIRA 10:10)

(Foundations)









TOKAR, G.

703. **Researches into the synthesis and determination of tropinone.** G. Gál, I. Simonyi and G. Tokár (Lab. United Pharm. and Nutrient Factory, Budapest, Hungary). *Acta Chim. Acad. Sci. Hung.*, 1955, **6** (3–4), 365–371.—Tropinone is pptd. quant. by Reinecke's salt, when a pink tropinone reineckate of composition $C_8H_{13}ONH[Cr(SCN)_4(NH_3)_2]$ is formed. A 20 to 30 per cent. excess of a 1 per cent. filtered aq. soln. of Reinecke's salt is used, so that the supernatant liquid remains pink. After dilution, the ppt. is allowed to stand for 1 hr., when it is filtered through a No. 3 sintered-glass filter. The ppt. is washed first with water and then twice with 5 ml of 96 per cent. ethanol and dried for 30 min. at 105° C.

J. H. Watson

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Tokár, Géza

Synthesis and determination of tropinone.

Gál, István Sinnmyi, and Géza Tokár (United Pharm. Nutrient Factory, Budapest). *Magyar Kém. Folyóirat* 61, 74–7(1955). Tropinone was detd. in the reaction mixt. as follows. To a sample adjusted to pH 2 and to another adjusted to pH 6, resp., was added a 1% aq. soln. of Reinecke salt in 20–30% excess (the supernatant should remain durably pink), the liquid made up with distd. water to 50 ml., allowed to stand 1 hr., filtered (glass filter 1G3), and the filter cake washed with distd. water, then twice with 5 ml. 90% EtOH, dried 30 min. at 105°, and weighed. The tropinone reineckate, m. 181–2°, contained N 9.09, Cr 11.18%. In synthesizing tropinone, a reaction mixt. contg. 4.3 g. $(CH_2CHO)_2$ was treated with 11.7 g. $CO(CH_2CO_2H)_2$, the mixt. adjusted with $K_2CO_3$ to pH 5, 90 ml. of 12% neutral soln. of Na citrate and 5.4 g. $MeNH_2.HCl$ added, and the soln. made up with distd. water to 150 ml. and allowed to stand for periods varying from 1 to 50 hrs. gave 80% tropinone. Also in *Acta Chem. Acad. Sci. Hung.* 6, No. 3–4, 365–71(1955).

István Pályi

TOKAY G.

34. Determination of penicillin by a new chemical method — G. Tokár, I. Simonyi, G. Gál. (*Magyar Kémiai Folyóirat* — Vol. 61, 1955, No. 5, pp. 140—149, 3 tabs.)

CA

It was found that Fehling's reagent is reduced by penicillin and simultaneously ammonia is set free. From the two existing nitrogens that of the acid amide group in the penicillin molecule is transformed quantitatively into ammonia and by its acidimetric titration the reaction is suitable for the convenient and rapid determination of penicillin. The method was found useful for the determination of dibenzyl-ethylenediamine-dipenicillin salt and other penicillin combinations. The determination is conveniently carried out in a Schulek-Vastagh type apparatus constructed for the distillation of ammonia. To a sample weighed with analytical precision the following reagents are added in a 1 : 1 ratio: 60 g $CuSO_4 \cdot 5H_2O$ dissolved in 1000 ml of distilled water, 34 g NaOH and 100 g $KNaC_4H_4O_6$. Then the mixture is boiled. The ammonia distilling off is adsorbed into an acid solution of known concentration. Excess acid is back-titrated thereby establishing the quantity of liberated ammonia which is equivalent to the penicillin present in the sample. The method yields adequate analysis data with either 0.1 *N* or 0.01 *N* solutions.

(2)

TOKAR 5.

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The role of aluminium halogen alcoholates in the Meerwein-Ponndorf-Verley reduction. T. Tóth, I. Simonyi. *Magyar Kémiai Folyóirat*. Vol. 68, 1962, No. 9, pp. 268–274, 5 figs., 8 tabs.

Partial or total reductive dehalogenation occurs if preparation of aluminium alcoholates is conducted in the presence of alkyl halides, and dialkoxy aluminium halides of the general formula $X.Al(OR)_2$ are produced by the action of the liberated halogen acids. For instance by refluxing 1 mol of aluminium in the presence of mercuric chloride in isopropyl alcohol with 0.55 mol of carbon tetrachloride aluminium chloroisopropylate [Cl. $Al(OC_3H_7)_2$] was obtained in yields of 72 to 75% which separated from the reaction mixture as a crystalline precipitate. It was found that the velocity of the Meerwein-Ponndorf type reduction of carbonyl compounds was generally appreciably increased when the aluminium isopropylate employed contained 20 to 35% of aluminium isopropylate. It proved to be especially advantageous to conduct the reduction with aluminium chloroisopropylate-aluminium isopropylate mixtures if upon prolonged heating with aluminium isopropylate the compound yielded unwanted by-products. The reactions took place at lower temperatures by using the mixed agent consequently the quantity of by-products diminished. The reduction of different halogen ketones, acylamino hydroxyketones and unsaturated ketones was realized successfully with excellent yields by employing mixtures of aluminium isopropylate and aluminium chloroisopropylate.

TOKAR, GEZA

Hungary/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61476

Author: Gal, Gyorgy; Simonyi, Istran; Tokar, Geza

Institution: None

Title: Role of Aluminum Haloalcoholates in the Meerwein-Ponndorf-Verley Reduction. II. Reduction of α-Bromoketones by Means of a Mixture of Aluminum Isopropylate and Aluminum Chlorisopropylate

Original Periodical: Aluminium-halogenalkoholatok szerepe a Meerwein-Ponndorf-Verley redukcional. II. α-Bromketonok redukcioja aluminium izopropilat es aluminium-klorizopropolat keverekevel, Magyar. kem. folyoirat, 1955, 61, No 11, 362-367; Hungarian; German resumé; Acta chim. acad. sci. hung., 1955, 8, No 1-3, 63-169; English; Russian and German resumés

Abstract: Reduction of α-secondary bromoketones and α-bromisobutyrophenone (I) according to Meerwein-Ponndorf, using the mixture (iso-$C_3H_7O)_3Al$ (II) + (iso-$C_3H_7O)_2AlX$ (IIIX = Br, IVX = Cl) gives a

Card 1/3

Hungary/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61476

Abstract: good yield of corresponding bromhydrines. Formation of $C_6H_5CHBrC(CH_3) = CH_2$ and $C_6H_5CH = C(CH_3)CH_2Br$ in the course of the reduction of I with II (Stevens, P. G., et al, J. Amer. Chem. Soc., 1940, 62, 1424) is due to intermediate formation of $C_6H_5CHOHCBr(CH_3)_2$ (V). To α-bromopropiophenone (VI) (from propiophenone and $Br_2$, 0.3 mol each in 200 ml absolute $C_6H_6$) are added within 10-15 minutes 0.9 mol II in 400 ml absolute $C_6H_6$, and let stand at ~20°. II reacts partially with HBr contained in the solution and yields III; molar ratio II:III 0.66:0.24. After 24 hours (degree of conversion 92.5%) poured into a mixture of 1 kg ice 100 ml concentrated $H_2SO_4$, yield of $C_6H_5CHOHCHBrC_2H_5$ (VII) 84.1%, BP 102-104°/5 mm. On reduction (48 hours) of α-bromopropiophenone (0.3 mol) with mixture of 0.3 mol II and 0.1 mol IV yield of VII is 81.7%, to a solution of 0.6 mol II and 0.2 mol IV in 600 ml absolute $C_6H_6$ are added with cooling within 15-20 minutes 0.5 mol 2-bromocyclo-hexanone, let stand for 24 hours, yield of 2-bromocyclohexanol 73%, BP 85-87°/10 mm. High yields and absence of products containing no Br (see Stevens, et al, loc. cit.) are due to low temperatures of the reaction (0-20°) possibly due to the

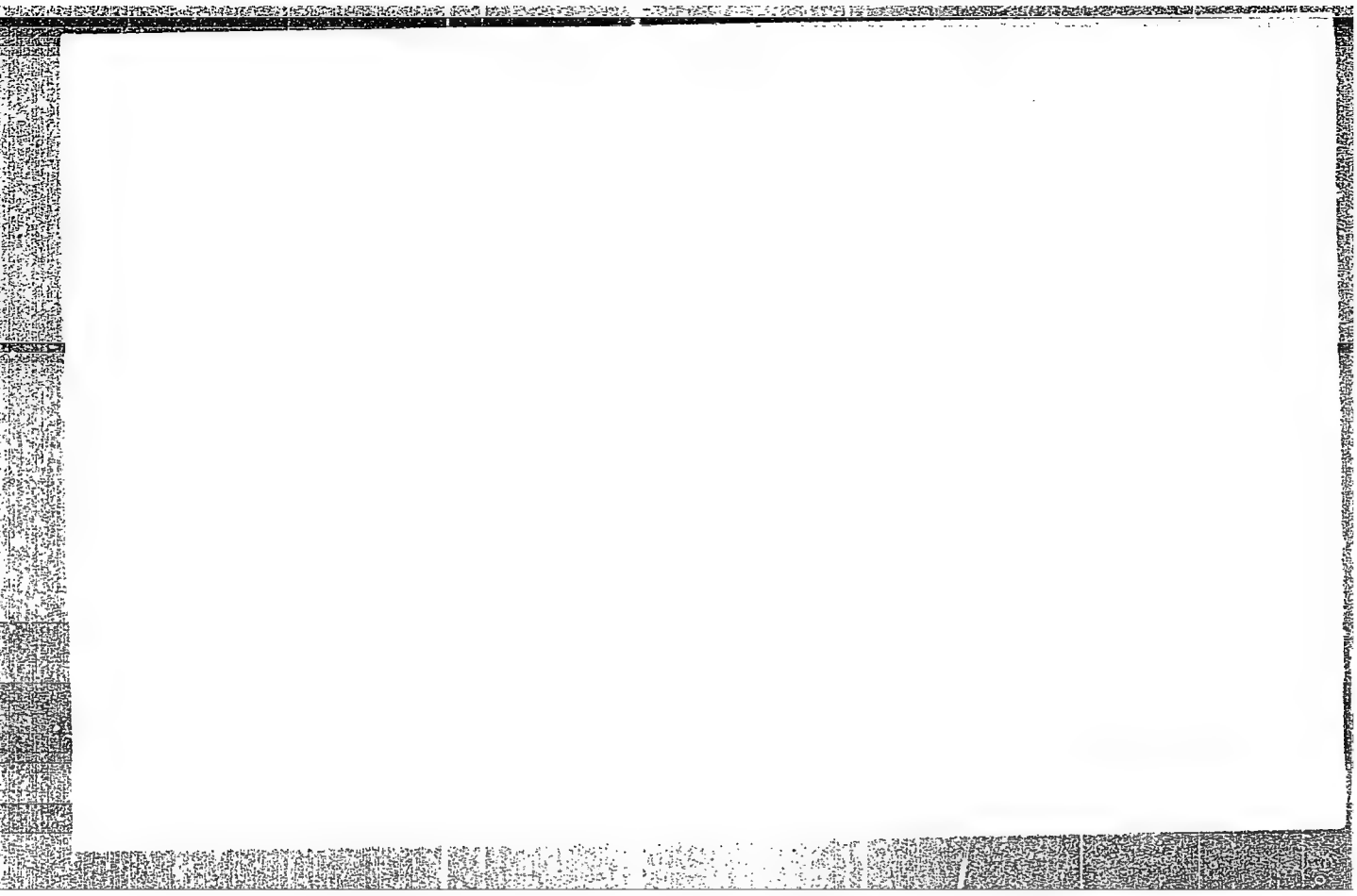
Card 2/3

Hungary/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61476

Abstract: accelerating action of III or IV. To a solution of 1 mol II and 0.4 mol IV in 1.2 l absolute $C_6H_6$ are added dropwise (30 minutes, 0-3°) 1 mol I let stand for 24 hours in the cold, yield of V 98.5% $n^{25}D$ 1.5497. On distillation (5 mm) V loses water and is converted to $C_6H_5CHC(CH_3)CH_2Br$. Acetyl derivative of V (from 22.9 g V and 50 ml $CH_3COCl$, boiled for 2 hours, yield 17.2 g) BP 117-119°/5 mm, MP 55-56° (from ethyl acetate + petroleum ether). Velocity of reduction of I and isobutyrophenone with mixture of II and IV (1:2) is about equal. Communication I, see Referat Zhur - Khimiya, 1956, 57915.

Card 3/3



APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001756020001-9"

SIMONYI, Istvan; TOKAR, Geza

Reaction of propionaldehyde with chloroaluminum alcoholates.
Magy kem folyoir 65 no.2:50-52 F '59.

1. Egyesult Gyogyszer- es Tapszergyar Laboratoriuma, Budapest.

TOKAR, Geza; SIMONYI, Istvan

Determination of 2-methyl-2.3-pentene in presence of 2-methyl-valeraldehyde. Magy kem folyoir 68 no.8:333-335 Ag '62.

1. Egyesult Gyogyszer- es Tapszergyar, Budapest.

SIMONYI, Istvan; TOKAR, Geza

A new reagent for titrations in an anhydrous medium. IV. Measuring organic acid salts in glacial acetic acid medium by chloroaluminumizo-propylate. Magy kem folyoir 66 no. 2:74-76 F. '60.

1. Egyesult Gyogyszer- es Tapszergyar Laboratoriuma, Budapest.

TOKAR, Geza; SIMONYI, Istvan

Chloroaluminum alcoholate reactions with organic acids. Magy kem folyoir 66 no. 6:201-203 Je'60.

1. Egyesult Gyogyszer- es Tapszergyar, Budapest.

Distr: 4E2c(J)/4E3b/4E3d

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1-BW(BW)
2-jaj (NB)(Mary)
3

**Reactions of chloroaluminum alcoholates with organic acids.** Géza Tokár and István Simonyi (Egyesült Gyógyszer Tápszergyár, Budapest, Hung.) *Magyar Kém. Folyóirat.* 66, 201–3(1960).—Chloroaluminum alcoholates reacted with org. acids to give the chloroaluminum salt of the acid, if the reaction was run in the cold: $ClAl(OR)_2$ (I) + 2 $R^1CO_2H$ → $ClAl(O_2CR^1)_2$ + 2 ROH. If the mixture was heated, an ester was formed: $ClAl(OR)_2$ + 2 $R^1CO_2H$ → 2 $RCO_2R^1$ + $ClAl(OH)_2$. The formation of the ester was greatly influenced by the soly. of the primary product in the reaction mixt. In the case of aromatic acids the low soly. of the salt prevented esterification, while with low-mol.-wt. aliphatic acids, the esters formed almost quant. In the course of the expts., iso-PrOAc was prepd. from 50 g (iso-PrO)$_2$AlCl and 40 g. AcOH in 93.6% yield by refluxing the mixt. 1–2 hrs. and adding water to sep. the ester. Similarly, $MeO_2CCHCl_2$ (II) was prepd. in 71.3% yield. Yields were higher if the HCl salts of I were used. II was prepd. (95.5% yield) after 1 hr. of boiling. In the same manner, $EtO_2CCHCl_2$ (85.6% yield), $EtO_2CH_2Ph$ (71.7% yield), and di-Me phthalate (28.2%) were prepd. Prepn. of chloroaluminum acetate (III) was described, as well as the reaction of III with iso-PrOH. Reaction of III with $H_2O$ led to $ClAl_2OH_4$. Peter Martenfalvi

TOKAR, G.

33. Reaction of benzaldehyde with chloroaluminium isopropylate. (In German) G. Tokár, I. Simonyi. *Acta Chimica Academiae Scientiarum Hungaricae*. Vol. 19, 1959, No. 1, pp. 83—87

Benzaldehyde vigorously reacts with chloroaluminium isopropylate (I). A mixture of benzaldehyde and acetone undergoes condensation in the presence of I in a 75% yield as referred to I. Chloroaluminium isopropylate, prepared by the authors, was applied by them for the first time as a reducing agent when benzaldehyde was reduced to benzyl alcohol in isopropyl alcohol medium at 0° C in a yield of 90% without any side reactions. At higher temperatures the acetone formed in the reaction acts upon the unreacted benzaldehyde by the effect of I and dibenzalacetone is obtained.

JAAK, G.

Distr: 4E3d

Reaction of propionaldehyde with chloroaluminum alcoholates. István Simonyi and Géza Tokár (Egyesült Gyógyszer- és Tápszergyár, Budapest, Hung.). *Magyar Kém. Folyóirat* 65, 80–2(1959).—In an alc. medium, EtCHO (I) formed acetals $EtCH(OR)_2$ with $ClAl(OR)_2$ (II), even at −10°. II replaced the normally employed acid catalyst and bound any $H_2O$ formed in the reaction. To 0.5 mole II (R = Me, Et, or iso-Pr) was added 2 moles MeOH, EtOH, or iso-PrOH, resp., the mixt. cooled to from 0 to −10°, 1 mole I added dropwise in 10 min., stirred 30 min., kept 2 hrs. from 0 to 10°, 100 ml. $Et_2O$ (for Me acetal; 100 ml. $CHCl_3$ and 300 ml. $H_2O$ for Et or iso-Pr acetal) added, the solvent fraction sepd. from $H_2O$, dried over $Na_2SO_4$, and fractionated. To det. the acetal content, 0.10–0.20 g. material was added to 5 ml. 5% alc. hydroxylamine soln., bromophenol blue indicator added, the mixt. refluxed 3 hrs., cooled to room temp., the pH adjusted to the color changing point, and the excess hydroxylamine titrated with 0.1*N* NaOH soln. One ml. 0.1*N* NaOH soln. equaled 10.415 mg. dimethyl acetal (b. 84–6°), 13.221 mg. diethyl acetal (b. 122–5°), and 15.025 mg. diisopropyl acetal (b. 145–7°). L. G. Arvai

6
1 BW (BW)
2- JAJ (MB) (mag)
1- JPT (DH)
1

COUNTRY : Hungary
CATEGORY :

ABS. JOUR. : RZKhim., No. 22 1959, No. 78556

AUTHOR : Tokar, G. and Simonyi, I.
INST. : Not given
TITLE : The Reaction of Benzaldehyde with Aluminum Ortho-tert-butylphenolate Isopropylate

ORIG. PUB. : Magyar Kem Folyoirat, 64, No 10, 377-378 (1958)

ABSTRACT : The authors have shown that in the reaction of benzaldehyde (I) with (iso-$C_3H_7O)_2AlCl$ (II) the reduction of I to benzyl alcohol (III) may be paralled by a condensation of I with the acetone (IV) produced in the reaction to give dibenzalacetone (V). When IV is added to the reaction mixture, V is formed as the main product. In an [illegible] II in 50 ml abs iso-$C_3H_7OH$ is treated dropwise with a mixture of 31.8 gms I and 8.7 gms IV, the resulting mixture is heated for 1 hr at 50-60°.

CARD: 1/2

COUNTRY : Hungary

CATEGORY :

79501

ABS. JOUR. : RZKhim., No. 1959, No.

AUTHOR : Tokar, G. and Simonyi, I.

INST. : Not given

TITLE : A New Reagent for Volumetric Analysis in Nonaqueous Media. III. The Determination of Derivatives of Aniline, Pyridine, and of Esters of p-Aminobenzoic*

ORIG. PUB. : Magyar Kem Folyoirat, 64, No 10, 379-382 (1958)

ABSTRACT : The determination of aniline, p-anisidine, p-phenetidine, 2,6-diaminopyridine, and of the esters of p-aminobenzoic acid, e.g., novocaine and xylocaine, is carried out by titration with 0.1 N Cl-Al-isopropylate in $CHCl_3$, in the presence of Ethyl Orange or of Dimethyl Yellow (0.1% solutions in $CHCl_3$). 40-80 mg of sample in 5-10 ml of solvent are titrated under natural light. p-chloroaniline cannot be titrated by the above procedure, which makes it possible to determine

CARD: 1/2 *Acid with the Hydrochloride Complex of Cl-Al-isopropylate.

TOKAR, G.; SIMONYI, I.

Reaction of benzaldehyde with chloroaluminum isopropylate. p.83

ACTA CHIMICA. Budapest, Hungary. Vol. 19, no. 1, 1959

Monthly List of East European Accessions (EEAI), LC. Vol.8, No. 9, September 1959
Uncl.

AUTHOR :
CATEGORY : G-2

ABS. JOUR. : RZKhim., No. 21 1959, No. 74835

AUTHOR : Simonyi, I. and Tokar, G.
INST. : Not given
TITLE : The Reaction of Propionaldehyde with Aluminum Alkoxychloride

ORIG. PUB. : Magyar Kem Folyoirat, 65, No 2, 50-52 (1959)

ABSTRACT : The authors have investigated the action of $AlCl(OR)_2$ on $C_2H_5CHO$ (I). The reaction proceeds very vigorously. It has been found that $AlCl(OR)_2$ catalyzes the process. A mixture of 0.5 mol $AlCl(OR)_2$ and 2 mols of the corresponding ROH is cooled to temperatures from -10 to 0° and treated for 10 min with 1 mol I; extraction with ether (in the case of $CH_3OH$) or $CHCl_3$ (in the case of $C_2H_5OH$ or iso-$C_3H_7OH$) after 2 hrs yields $C_2H_5CH(OR)_2$ (R and the bp in °C are

CARD: 1/2

COUNTRY : Hungary
CATEGORY : G-2

ABS. JOUR. : RZKhim., No. 21 1959, No. 74836

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : given): $C_4$, 84-86 ($d_4^{20}$ 0.8649), $C_2H_5$, 122-125 ($d_4^{25}$ 0.8239); iso-$C_3H_7$, 145-147. The purity of the product obtained (determined by the hydroxylamine method) is 97, 98.2, and 99.5%, respectively.
S. Rozenfel'd

CARD: 2/2

HUNGARY / Organic Chemistry. Synthesis. G-2

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23451

Author : Simonyi, I.; Tokar, G.
Inst : Academy of Sciences, Hungary
Title : Study of Aluminum Alcoholates. I. Aliphatic Halogen Aluminum Alcoholates. Preparation and Thermal Decomposition of Hydrochloric Complexes of Halogen Aluminum Alcoholates. II. Reactions of Aluminum Phenolate and Aluminum Benzylate with Hydrochloric Acid.

Orig Pub: Acta chim. Acad. scient. hung., 1958, 15, No 3, 291-295; 297-300.

Abstract: I. Halogen aluminum alcoholates $AlCl(OR)_2$ (IIa) (R = $CH_3$, $C_2H_5$, $C_3H_7$, iso-$C_3H_7$ and tert-$C_4H_9$) were prepared by the introduction of 1 mole of

Card 1/3

HUNGARY / Organic Chemistry. Synthesis. G-2

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23451

Abstract: dissociate with separation of HCl and ROH. $(C_6H_5CH_2)_2O$ was prepared by heating II (R = $C_6H_5CH_2$) with $C_6H_5CH_2OH$ to 40-60°. II (R = $C_6H_5CH_2$)·HCl dissociates with separation of RCl. -- F. Velichko

Card 3/3

HUNGARY/Analytical Chemistry. Analysis of Organic Substances. E

Abs Jour: Ref Zhur-Khim., No 9, 1959, 31092.

$C_3H_7OH$, or in other solvents not containing H or their mixtures. In analysis in an alkaline medium the alkali concentration is fixed at the level of 1.2%. A small amount of Ni catalyst containing 3-5% of Al is introduced and the whole is heated for 30-60 minutes. A reflux condenser is used. The not very strongly bonded " separates in 15-20 minutes. The solution is then filtered free from the catalyst, acidified with $HNO_3$ and ion F is determined according to Volhard's method. The decomposition of organic substances that become very resinous or acquire dark coloration in an alkaline medium is performed in an acid solution using bone charcoal as catalyst and granulated Zn for the liberation of $H_2$. The method is applicable when the concentration of substances undergoing analysis is

Card : 2/3

107



HUNGARY/Analytical Chemistry. Analysis of Organic Substances. E

Abs Jour: Ref Zhur-Khim., No 9, 1959, 31092.

0.02 or 0.01 normal. H content has been determined in monochlorobenzene, in DDT, in n-chlorophenol, chloramphenicol etc. It was determined that under the described conditions 2 atoms of H separate from $CHCl_3$. The method is used for preparative purposes in general and in particular for the control of the process of deriving 3,4 dioxy-$\omega$-isopropylaminoacetophenone, which forms upon the interaction of chloroacetopyrocatechin with iso-propylamine. It is also used in the process of reducing aryl-$\omega$-chloroalkylketones, and in the study of potassium salt of G-penicillin and of procaine-penicillin G. -- T. Lev.

Card : 3/3

Country : Hungary
Category : Analytical Chemistry. Analysis of Organic Substances. E-3
Abs. Jour. : Ref. Zhur.-Khimiya No. 6, 1959 19190
Author : Simonyi, I.; Tokar, G.
Institut. : Hungarian Academy of Sciences
Title : Syntheses of Ketones According to Friedel-Craft and Fries. Determination of the Content of Ketones in the Reaction Mixture. *
Orig. Pub. : Acta chim. Acad. scient. hung., 1958, 15, No 3, 285-290

Abstract : See RZhKhim, 1958, 35956.

Card:

* Determination of Ortho- and Para-Isomers in the Presence of One Another. E-44

Distr: 4E2c(j)?

Aluminum alcoholates. I. Aliphatic halogen aluminum alcoholates. Preparation and thermal decomposition of hydrochloric acid complexes of the halogen aluminum alcoholates. Géza Tokár and István Simonyi. *Acta Chim. Acad. Sci. Hung.* 15, 291-6(1958). II. Reactions of aluminum phenolates and benzylates with hydrochloric acid. István Simonyi and Géza Tokár. *Ibid.* 297-300(in German); cf. *C.A.* 52, 15458*d*. J. B. Austin

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2 may
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Distr: 4E2c(j)

Investigation of the Friedel-Crafts and Fries ketone syntheses. Determination of oxo compounds in the reaction mixture and concurrent determination of *o*- and *p*-isomers. István Simonyi and Géza Tokár (Egyesült Gyógyszer Tápszergyár Lab., Budapest). *Magyar Kém. Folyóirat* 63, 11–14(1957).—Ketones are detd. in various reaction mixts. by addn. of a soln. of $(iso\text{-}PrO)_3AlCl$ and $(iso\text{-}PrO)_3Al$ in iso-PrOH and distg. the mixt. with acetone formed during the reduction. The amt. of the acetone in the distillate is detd. by $NH_2OH.HCl$. In a mixt. of *o*- and *p*-hydroxyacetophenone only the *p*-isomer is reduced. The *o*-isomer gives a fluorescence with $(iso\text{-}PrO)_3AlCl$, which is proportional to the concn. of the *o*-isomer and can be detd. quantitatively by means of a photometer. Saul Patai.

TOKAR, G.

HUNGARY / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour : RZhKhim., No 10, 1958, No 32412

Author : Gyorgy Gal, Istvan Simonyi, Goza Tokar.
Inst : Not given
Title : Corrections to the Paper of Gal, Simonyi and Tokar "Part of Aluminum Halogenalcoholates at the Reduction by Meerwein-Ponndorf-Verley. II. Reduction of -Bromoketones with Mixed Aluminum Isopropylate and Aluminum Chloroisopropylate".

Orig Pub : Magyar kem. folyoirat, 1956, 62, No. 3, 112.

Abstract : To RZhKhim, 1956, 61476

Card 1/1

11

TOKAR, G.

Science

"MAGYAR KEMIAI FOLYOIRAT"

Reaction of benzaldehyde with chlorine-aluminum isopropylate. p. 377

Vol. 64, No. 10, Oct. 1958

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 4, April 1959
Unclas.

TOKAR, G.

Science

"MAGYAR KEMIAI FOLYOIRAT"

A new reagent for titrations in an anhydrous medium. III. Determination of aniline, pyridine derivatives, as well as p-aminobenzoic-acid esters by chlorine-aluminum-isopropylate hydrochloric-acid comrlex. p. 379

Vol. 64, No. 10, Oct. 1958

Monthly List of East European Accessions (EEAI), LC, Vol. 8, NO. 4, April 1959
Unclas.

HUNGARY/Analytic Chemistry. Analysis of Organic Substances. E

Abs Jour: Ref Zhur-Khim., No 23, 1958, 77382.

Author : Tokar, Geza; Simonyi, Istvan.
Inst :
Title : New Reagent for Titration in Non-Aqueous Media. I. Determination of Codeine, Quinine, Quinidine and Papaverine with Hydrochloric Complex of Aluminum Chloroisopropylate.

Orig Pub: Magyar kem. folyoirat, 1958, 64, No 3, 94-96.

Abstract: The authors found that the complexes of aluminum chloroalcoholates with hydrochloric acid [(RO)$_2$Al-Cl] .HCl obtained by them previously (RZh-Khim, 1958, 61015) dissolved in water-free $CHCl_3$ behaved as monobasic acids and produced little-soluble in water salts with alkaloids and similar bases. These

Card : 1/3

HUNGARY/Analytic Chemistry. Analysis of Organic Substances. E

Abs Jour: Ref Zhur-Khim., No 23, 1958, 77382.

salts are not suitable for gravimetric analysis, because they are little soluble in organic solvents. The solution of aluminum chloroisopropylate (I) in water-free $CHCl_3$ (other non-polar solvents are not suitable) was used in volumetric analysis for the determination of codeine, quinine, quinidine and papaverine. The indicator (3 to 4 drops of 0.2%-ual Ethyl Orange of Dimethyl Yellow solution in chlorobenzene) changes its color sharply from lemon-yellow into red. 0.1 n. I solution is used, the titer is determined with codeine. In two months' time the titer changes by 1 to 2%. It is necessary either to maintain a constant temperature during the titration, or to make a correction for the heat expansion of the solution. A sample of 0.10 to 0.18 g of the alkaloid

Card : 2/3

TOKAR, G.

HUNGARY / Organic Chemistry. Synthetic Organic Chemistry. G

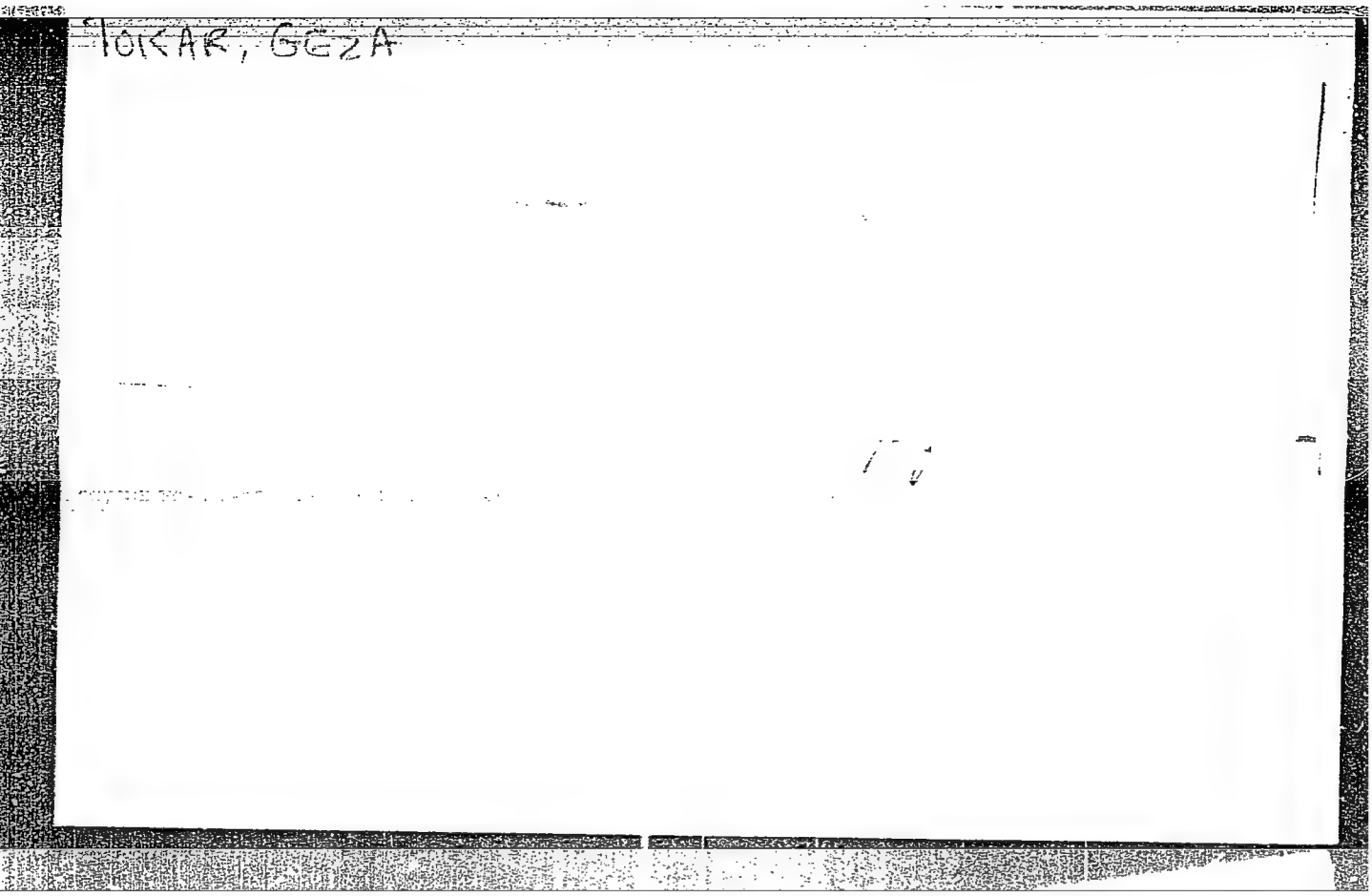
Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 61015.

Author : Geza Tokar, Istvan Simonyi.
Inst : -
Title : Study of Aluminum Alcoholates. Preparation of Aluminum Alcoholates, Their Complexes with HCl and Their Thermal Decomposition.

Orig Pub: Magyar kem. folyoirat, 1957, 63, No 6-7, 172-176.

Abstract: Crystalline $ClAl(OR)_2$-s, where R = $CH_3$, $C_2H_5$, $C_3H_7$, iso-$C_3H_7$, tert.-$C_4H_9$, $C_6H_5$and $C_6H_5CH_2$, were prepared at 60 to 80%-ual yields by passing 1 mole of HCl (gas) through $Al(OR)_3$ (I) solution in ROH after distilling ROH off. A corresponding crystalline $ClAl(OR)_2.HCl$ (II) is produced by passing 2 moles of HCl through I. II-s dissociate at heating (above 40°) producing RCl, $R_2O$ and ROH. Thus, the follow-

Card 1/2



E-3

HUNGARY/Analytical Chemistry - Analysis of Organic Substances

Abs Jour : Ref Zhur O Khimiya, No 4, 1958, No 11050

Author : Istvan Simonyi, Geza Tokar
Inst : Not Given
Title : Method of Quantitative Determination of Nitroglycerin in Pharmaceutical Preparations

Orig Pub : Acta pharmac. hung., 1957, 27, No 1-2, 17-19

Abstract : Nitroglycerin (I) is saponified and reduced by $NH_3$ in a 0.1 to 0.5%-ual NaOH solution with Raney's catalyst. The saponification and reductions proceed rapidly and quantitatively (sic!). A solution of I in alcohol containing from 0.7 to 1.0 g of I is diluted with alcohol to make 50 mlit, 5 mlit of water is removed (sic!), 20 mlit of water and 0.5 g of Raney's catalyst are added. The colution is slowly brought to the boiling point (reflux condenser), 5 mlit of 10%-ual NaOH solution is added, all is boiled 15 minutes and distilled (in an equipment consisting of t2o condensers connected in series) into a receiver with 20 mlit of 0.1 n.

Card : 1/2

14

Card 2/2

Tokar, G.

HUNGARY/Analytical Chemistry. Analysis of Organic Substances. E-3

Abs Jour: Ref. Zhur.-Khimiya, 1958, No II, 35956.

Author : I. Simonyi, G. Tokar.
Inst : Not given.
Title : Synthesis of Ketons According to Friedl-Crafts and Fries. The Determination of Content of Ketones in Reaction Mixture. The Determination of Ortho-and Para-Isomers when They Are Simultaneously Present.

Orig Pub: Magyar kem. folyoirat, 1957, 63, No I, II-14

Abstract: The method of determination of oxo-compounds published before (R Zh Khim, 1956, 65336) can be used for determination of the content of ketones formed, according to the method Friedl-Crafts and Fries, directly in the reaction mixture. Under the action of Al isopropylate (I) and Al chlorisopropylate (II) the ketones are reduced and

Card : 1/3

HUNGARY/Analytical Chemistry. Analysis of Organic Substances. E-3

Abs Jour: Ref. Zhur.-Khimiya, 1958, No II, 35956.

to control the course of Fries' rearrangement with an accuracy of up to ± 2-3%. Detailed analyses methods are given in this paper.

Card : 3/3

TOKAR, G.; SIMONYI, I.

Investigation of Friedl-Crafts' and Fries' synthesis of ketones; determination of oxo compounds, determination of ortho- para-isomers side by side. p. 11. (Magyar Kemiai Folyoirat, Vol. 63, No. 1, Jan 1957, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

[illegible], M.; [illegible], I.

An investigation of aluminum alcholates; preparation of aluminum-chlorine-alcholates, as well as their hydrochioric complex and their thermal decomposition.

p.172 (Magyar Kemiai Folyoirat) Budapest Vol. 63, no.6/7 June/July 1957

SO: Monthly Index of East European Acessions (AMEI) Vol. 6, No. 11 November 1957

TOK AR, G. A

Albite from amygdules in basalts of Karakuby in Donets basin. G. K. Tokar (Lvov Univ.). *Mineralog. Sbornik, L'vov. Geol. Obshchestvo* 4, 316–17(1950).—Chem. and optical analyses show that the rose-colored material found in radial amygdules, macroscopically resembling zeolites, is albite.

Marie Siegrist

TOKAR', I.Ya., kand. tekhn. nauk; BYALYY, B.I., inzh.

Calculating the hydrostatic lifting of shafts in journal and thrust bearings. Vest. mashinostr. 45 no.5:14-20 My '65.
(MIRA 18:6)

TOKAR', I.Ya. (Khar'kov); BYALYY, B.I. (Khar'kov)

Design of thrust bearings. Mashinovedenie no.3:91-99 '65.
(MIRA 18:6)

TOKAR', I.Ya. (Khar'kov)

Design of journal bearings operating at variable angular velocities. Mashinovedenie no.2:116-127 '55. (MIRA 18:8)

TOKAR

In Abstract of preceding ethyl silicate coatings for precision
casting with wax pattern. Kon Lap 27 no.7,Suppl:Ceramics 15
no.7:164-166 Jl '64.

TOKAR, Istvan

Dimensioning of the inpouring system of steel castings. Koh lap 96 no.12 Suppl.:Ontode 14 no.12:280-285 D '63.

TOKAR, Istvan

"Shrinking of steels smelted in electric furnaces with acid lining" by A.Ja.Satov, V.P.Csernobrovkin. Reviewed by Istvan Tokar. Koh lap 98 no.2:Suppl:Ontode 16 no.2:44-45 F '65.

TOKAR, Istvan

"Shape of graphite in cast iron treated with rare-earth metals" by N.Saidorov. Reviewed by Istvan Tokar. Koh lap 98 no.2: Suppl:Oniode 16 no.2:45-46 F '65.

GRUNER, Ede, okleveles gepeszmernok; SZENDE, Gyorgy, okleveles gepeszmernok; TOKAR, Istvan, okleveles kohomernok

Inventory of products and other materials in the foundries owned by the Ministry of Metallurgy and the Machine Industry. Koh lap 96 no.10:Suppl: Ontode 14 no.10:217-231 O '63.

1. Gepipari Technologiai Intezet.

MAKHIN, V.A.; PRISNYAKOV, V.F.; TOKAR', I.F.

Theory of the outflow of a boiling liquid through a centrifugal jet. Izv.vys.ucheb.zav.; av.tekh. 5 no.3:166-176 '62.
(Fluid dynamics) (MIRA 15:9)

TOKAR, Istvan

"Specialization and designing of foundry workshops and factories" by V.M. Shestopal. Reviewed by Istvan Tokar. Koh lap 97 no.6:Suppl.:Ontodo 15 no.6:141-143 Je'64.

TOKAR, Istvan

Characteristics of the low pressure casting of bronze. Koh lap 97 no.5:Suppl.:Ontcde 15 no.5:110 My'64.

Determination of the thickness of outside chill irons for iron castings with spheroidal graphite. Koh lap 97 no.5: 114 My'64.

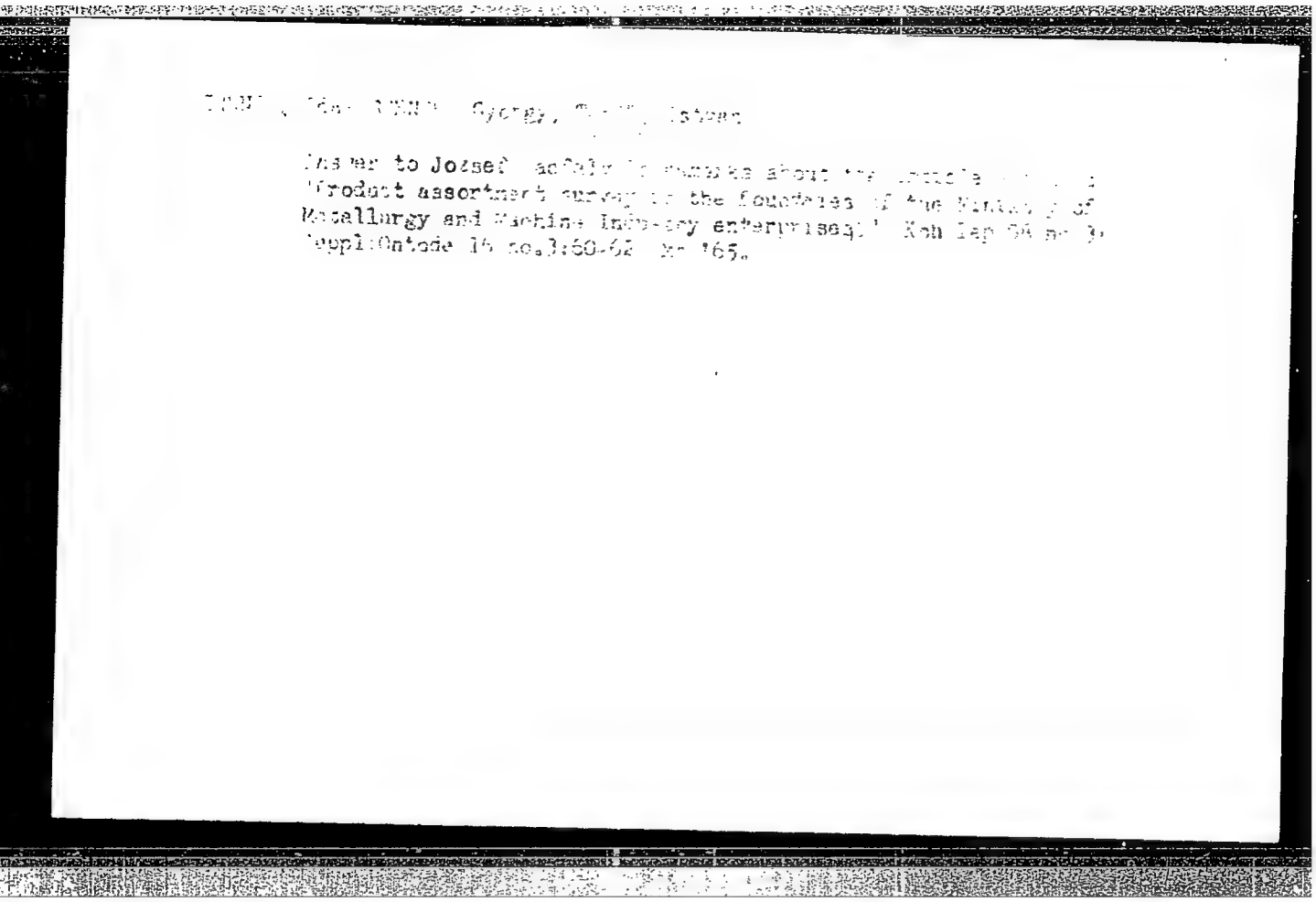
TOKAR, Istvan, okleveles kohomernok

Quickly exchangeable mountings on moulding machines. Koh lap 95 no.12;Suppl.:Ontode 13 no.12:265-271 D '62.

1. Gepipari Technologiai Intezet.

TOKAR, Istvan

"Crack resistance of [illegible] castings" by N. P. Dubinyin, V.A. Kominzarov. Reviewed by Istvan Tokar. Koh lap 97 no.11:Suppl Ontode 15 no.11:266-269 N '64.



Answer to Jozsef [illegible] remarks about the article [illegible] 'Product assortment survey in the foundries of the Hungarian Metallurgy and Machine Industry enterprises.' Koh Lap 94 no 3, Suppl:Ontode 14 no.3:60-62 Mr '65.

ACC NR: AP7001424 (A) SOURCE CODE: UR/0413/66/000/021/0141/0141

INVENTORS: Saksaganskiy, T. A.; Shandorov, G. S.; Tokar', I. F.; Stipura, A. P.; Shipitsyn, V. M.; Zel'dina, T. S.; Yurchenko, N. P.

ORG: none

TITLE: A method of testing hollow products for hermetic seal and for strength. Class 42, 188094 [announced by All-Union Scientific Research, Construction, and Engineering Institute of the Pipe Industry (Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorsko-tekhnologicheskiy institut trubnoy promyshlennosti)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 141

TOPIC TAGS: liquid gas container, liquid nitrogen, hermetic seal, pipe, static test, test method

ABSTRACT: This Author Certificate presents a method of testing hollow products for hermetic seal and for strength. The method involves filling a hollow product with water and connecting it to a working cylinder in which the necessary pressure is produced. To create high testing pressures, liquid gas, such as nitrogen, is introduced into the cylinder. This gas, while vaporizing, creates the necessary testing pressure. The intensity of this pressure depends on the amount of the introduced gas and on the rate of its vaporization. The working cylinder may be partly filled with water which forms an ice layer when some of the liquid gas is introduced. A

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UDC: 620.165.29:620.178

ACC NR: AP7001424

measured amount of liquid gas is then poured onto the ice layer. To create a testing pressure higher than 800 kg/cm$^2$, the working cylinder may be fully filled with liquid gas and then chilled by being submerged in a bath of the same liquid gas.

SUB CODE: 13/ SUBM DATE: 02Jul65

Card 2/2

PASECHNYY, S.A.; CHAMIN, I.A.; ZAYTSEV, V.V.; TOKAR', I.K.

Use of technological dispersed lubricants in cold rolling.
Sbor. nauch. trud. Fiz.-tekh.inst. AN BSSR no.7:65-74 '61.
(MIRA 15:7)

(Rolling (Metalwork)) (Metalworking lubricants)

CHAMIN, I.A., inzh.; TOKAR', I.K., inzh.; ZAYTSEV, V.V., inzh.

Cold rolling of sheet steel with use of surface active metal-working lubricants. Sbor. trud. TSNIICHM no.28:7-23 '62.
(MIRA 15:11)

(Rolling (Metalwork)) (Metalworking lubricants)

CHAMIN, I.A., inzh.; TOKAR', I.K., inzh.; BAUMAN, V.N., inzh.

Investigating the lubricating capacity of ultra-dispersed metal-working lubricants. Sbor. trud. TSNIICHM no.28:24-34 '62.
(MIRA 15:11)

(Metalworking lubricants--Testing)

S/130/60/000/04/03/006

18.5100

AUTHORS: Tokar', I.K., and Chamin, I.A.

TITLE: New Lubricants for Cold Rolling of Strips

PERIODICAL: Metallurg, 1960, No. 4, pp. 28 - 29

TEXT: Experiments conducted by TsNIIChM, - in which participated I.D. Samoylov, V.A.Gamershteyn of Zaporozhstal' Plant, I.I.Yelin, F.S.Lednikov, I.A. Ostrovskiy, Ye.M.Kontsvaya of Serp i Molot Plant, M.A.Leychenko, V.V.Zaytsev, V.D. Kolomatskiy (TsNIIChM), - have shown that vegetable and animal fats are closely resembling palm oil as far as physico-chemical properties are concerned and can therefore replace the latter. In view of the fact that animal fats are liable to oxidize quickly at high temperatures, in a moist medium and in the presence of metal, these can only be used in connection with cold rolling with the addition of antioxidizers. TsNIIChM in cooperation with VNIIMP has developed a number of lubricants on the basis of animal fats for cold rolling of thin low carbon (0.1%C) steel strips. Experiments permitted to make the following conclusions: almost all lubricants made from animal fat produced greater metal elongation during cold rolling than palm oil, best results were obtained with VNIIMP No. 2 and No. 6 lubricants made from suet with an addition of 3-5% of free fatty acids. For harder

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New Lubricants for Cold Rolling of Strips S/130/60/000/04/03/006

working conditions tests were conducted on the 222/600x650 mm rolling mill of Zaporozhstal' Plant with a rolling rate of 72 m/minute. The new lubricant proved more effective than palm oil, resulting in less friction between metal and working rollers, less load on the motor, less pressure of the metal on the rollers and less resistance of the metal to deformation, while the quality of the metal remained unchanged. The laboratory of the All Union Thermo-Technical Institute under the supervision of Professor K.I.Ivanov has developed a certain number of strong anti-oxidizers for animal fats, of which the most effective is yanol (0.4% of fat) in conjunction with intensifier VTI-8 (0.02%). Using animal fat it requires 5 passes to roll a strip 0.4 mm thick from a 1.0 mm band while it takes 6 passes with an emulsion of mineral oil. In all instances of cold rolling of strips discussed in the article, it is pointed out by the author that it takes fewer passes to obtain a strip of the same thickness by using animal fat than it does when using mineral fat or stearin. Serp i Molot Plant has considerably intensified their process of cold rolling with lubricants from animal fat, especially in turning out thin (0.5 mm) strips of stainless metal. The use of animal fat lubricants decreases the number of thermal and etching operations required, which reduces the consumption of metal during etching and annealing. There is 1 graph.

Card 2/2

TOKAR', I.K.; CHAMIN, I.A.; Prinimali uchastiye: BOYKO, M.V.; CHUB, G.F; GAMERSHTEYN, V.A.; YASHNIKOV, D.I.; FILONOV, V.A.; TROSHCHENKO, N.A.; SAMOYLOV, I.D.; ZAYTSEV, V.V.; KOLOMATSKIY, V.D.

Efficient lubrication for the rolling of thin sheet iron. Metallurg 6 no.8:22-24 Ag '61. (MIRA 14:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Tokar', Chamin, Zaytsev, Kolomatskiy). 2. Zavod "Zaporozhstal'" (for Boyko, Chub, Gamershteyn, Yashnikov, Filonov, Troshchenko, Samoylov).
(Metalworking lubricants) (Sheet iron)

S/137/62/000/010/006/028
A052/A101

AUTHORS: Afanas'yev, I. D., Dobkin, I. Ye., Sazanova, M. N., Soltan, S. G., Garzanov, G. Ye., Tokar', I. K., Chamin, I. A., Belosevich, V. K., Pavlov, I. M.

TITLE: The effect of substances with a lower surface tension in the composition of synthetic lubricants on the cold rolling of thin metal strips

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 10, 1962, 8, abstract 10D46 ("Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya", no. 4, 1962, 23 - 27)

TEXT: The data on the effect of various technological lubricants on the cold rolling of strips on a two- and four-high mill are cited. Synthetic greases, - esters of saturated synthetic fatty acids, - reduce the friction and the resistance of metal to deformation at rolling of carbon steel and Ti ( BT-1-T) (VT-1-T) strips more effectively than animal fat, palm oil, mineral oils etc. Synthetic lubricants, due to their low costs and good lubricating quality, should

Card 1/2

The effect of substances with a lower surface tension..

be recommended for an extensive testing on cold rolling mills.

N. Yudina

[Abstracter's note: Complete translation]

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S/130/61/000/008/002/005
A006/A101

AUTHORS: Tokar', I. K.; Chamin, I. A.

TITLE: Efficient greases in rolling thin tin plate

PERIODICAL: Metallurg, no. 8, 1961, 22-24

TEXT: An investigation was made at TsNIIChM and the Zaporozhstal' plant to determine the effect of various surface-active greases (palm oil, castor oil, etc.) in rolling steel strips and plate on a four-high rolling mill. The study was carried out with the participation of M. V. Boyko, G. F. Chub, V. A. Gamershteyn, D. I. Yashnikov, V. A. Filonov, N. A. Troshchenko, I. D. Samoylov (Zaporozhstal' Plant), V. V. Zaytsev, V. D. Kolomatskiy (TsNIIChM). It was found that during the rolling of strips with the use of castor oil, the external friction coefficient decreased with greater reduction and cold working of the strip, and that within a reduction range up to 20% and over 50% and a specific load up to 80 kg/mm$^2$ the friction coefficient and the deformation resistance of the metal increased. The rolling process is stable at a load over 80 kg/mm$^2$. If the specific load on the rolls exceeds 130 kg/mm$^2$, the rolling process becomes unstable. The range of stable process is 10 to 40% reduction for palm oil, and

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Efficient greases in rolling thin tin plate

up to 50% reduction for castor oil. This is different for mineral oil and water emulsions. The critical reduction range per pass, when an abrupt increase of the metal deformation resistance takes place, is within 20 - 30% reduction at 100 kg/mm$^2$ specific load. The established regularities are of great practical importance. Previously, when rolling with a low-efficient emulsion, the rolling conditions were established on the assumption that the relative reduction decreased during the final pass and did not exceed 5 - 10%. When using surface active greases, reduction in the final pass was raised thus making it possible to eliminate one pass and to raise the efficiency of single-stand mills by 30 - 40%. The use of surface active greases reduced specific pressure on the rolls so that 0.8 mm thick metal can be used instead of 0.6 mm thick metal. The total deformation of strips was also increased by the new greases, so that thinner tin plate (up to 0.20 mm thick) can be produced. Presently, at Zaporozhstal' 0.20 - 0.25 mm thick tin plate is rolled on a single-stand mill from annealed 0.6 mm thick metal by two passes and by three passes on a continuous mill. Plate of 0.28 mm thickness is rolled from nonannealed metal in two passes. The experimental investigation has shown that the use of surface-active greases instead of water emulsion, permits the rolling of tin plate with higher partial and total reduction, and a

S/130/61/000/008/002/005
A006/A101

Efficient greases in rolling thin tin plate

reduction of passes from three to two. It is recommended to introduce such greases in other metallurgical plants. There is 1 figure.

ASSOCIATION: TsNIIChM

Card 3/3

BYALY, B.I.; TOKAR', I.Ya. (Khar'kov)

"Block bearing lubrication in hydrostatical lifting of shafts"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

L 10143-63 EPF(c)/EWT(m)/BDS/ES(s)-2—AFFTC/APGC/SSD—
Fr-4/Pt-4—BW/DJ
ACCESSION NR: AP3000893 S/0179/63/000/002/0149/0152

AUTHOR: Tokar', I. Ya.; Chernyakov, P. S. (Khar'kov) 69 66

TITLE: Contribution to the problem of the lubrication of journal bearings having a bearing surface of axially-symmetrical form.

SOURCE: AN SSSR. Izv. Otd. tekh. nauk. Mekhanika i mashinostroyeniye, no. 2, 1963, 149-152

TOPIC TAGS: journal bearing, friction bearing, axially-symmetrical journal bearing, bearing for large turbogenerator, design charts for bearings

ABSTRACT: The present theoretical study constitutes an extension of I. Ye. Tarapov's study on the steady-state flow of a viscous, incompressible, fluid between two flat rotating disks (Akad. nauk SSSR, Izv., Otd. tekh. nauk. Mekhanika i mashinostroyeniye, no. 2, 1959) and the first author's study of the similar problem of a frustum of cone and a plane disk (Vestnik elektropromyshlennosti, no. 6, 1960), the latter of which resulted in the

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L 10113-63
ACCESSION NR: AP3000893

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recommendation of end seals with a conical bearing surface for large turbogenerators. The present paper endeavors to develop calculation formulas for the design of some end seals and a number of types of thrust bearings with a conical bearing surface. The analysis examines the stationary flow of an incompressible viscous fluid between two axially symmetrical surfaces of which one rotates and the other is fixed. The flow is assumed to be laminar. Upon formulation of the Navier-Stokes equation and the equation of continuity, integration yields expressions for the loss of lubricant at the periphery, the friction moment, and the load-carrying capacity. Specific expressions are set forth for journal bearings with a bearing surface of conical shape and similar bearings having a cylindrical collar at the small-diam end of the journal which is helpful in ensuring effective lubrication under starting conditions and which in effect creates a bearing with a combined conical and cylindrical bearing surface. From the working charts developed from the analytical expressions for the dimensionless load-carrying capacity in terms of a nondimensional internal radius, it follows that the load-carrying capacity grows not only with increasing boundary pressure, but also with decreasing internal radius. Here not only the nondimensional load-carrying capacity but also the maximum admissible load increases. There are 17 numbered equations and 5 figures.

ASSOCIATION: none

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|---|---|---|
| SUBMITTED: 03May62 | DATE ACQ: 12Jun63 | ENCL: 00 |
| SUB CODE: MD, FL | NR REF SOV: 003 | OTHER: 000 |

Card 2/2 [illegible]

TOKAR', I.Ya. (Khar'kov); CHERNYAKOV, F.S. (Khar'kov)

Lubrication of thrust bearings having a conic supporting surface taking heat transmission into consideration. Izv.AN SSSR. Mekh. i mashinostr. no.4 123-126 Jl-Ag '63. (MIRA 17:4)

ACC NR: AP7009581 SOURCE CODE: UR/0114/66/000/011/0028/0031

AUTHOR: Tokar', I. Ya. (Candidate of Technical Sciences); Byalyy, B. I. (Engineer); Shayn, A. S. (Engineer)

ORG: none

TITLE: Design of thrust bearings

SOURCE: Energomashinostroyeniye, no. 11, 1966, 28-31

TOPIC TAGS: viscous flow, friction

SUB CODE: 20

ABSTRACT: An analysis of an analytic solution for the three-dimensional hydrodynamic problem of the flow of a viscous liquid between surfaces of complex form with a fixed law of distribution of oil pressure on the boundaries of the area. Formulas are produced for the distribution of pressure, carrying capacity, friction and oil expenditure, calculation with which gives completely satisfactory correspondence with the results of calculation using the finite differences method on the "Ural" computer and with experimental data. Orig. art. has: 2 figures, 24 formulas and 3 tables. [JPRS: 40,102]

Card 1/1 UDC: (62-233.23+63-762)62-135.001.24

0930 11:13

TOKAR', I.YA.; CHERNYAKOV, P.S. (Khar'kov)

"Lubrication of bearings operating the reverse regime"

Report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow 29 Jan - 5 Feb 64.

TOKAR', I.Ya., kand. tekhn. nauk; BYALYY, B.I., inzh.

Hydrostatic lifting of shafts in journal bearings. Vest. mashinostr. 43 no.7:11-15 Jl '63. (MIRA 16:8)

(Bearings (Machinery))—Lubrication)

TOKAR', I.Ya., kand.tekhn.nauk; CHERNYAKOV, P.S.

Designing friction supports with a conic carrying surface. Vest. mashinostr. 43 no.3:15-20 Mr '63. (MIRA 16:3)
(Bearings (Machinery))

TOKAR', I.Ya., kand.tekhn.nauk; D'YACHENKO, S.K., kand.tekhn.nauk; BOGDANOV, O.I., kand.tekhn.nauk; DOVZHUK, A.Ya., inzh.

Concerning the design of the end seals of a turbogenerator rotor. Vest. elektroprom. 32 no.5:68-70 My '61. (MIRA 15:5)
(Turbogenerators)

S/122/63/000/003/003/008
A004/A127

AUTHORS: Tokar', I.Ya., Candidate of Technical Sciences; Chernyakov, P.S.

TITLE: Calculation of friction bearings with tapered carrying surface

PERIODICAL: Vestnik mashinostroyeniya, no. 3, 1963, 15 - 20

TEXT: Since bearings of hydrodynamic friction used at present to an increasing extent have an inclined bearing carrying surface, which requires manual finishing operations, it is of considerable interest to develop surfaces that do not require manual scraping, but can be manufactured with practically any required accuracy on lathes. The authors present appropriate formulae for calculating the necessary parameters of such machining processes and compare the basic sealing parameters obtained by calculation with those obtained as a result of tests at an excess pressure of compressed air of 3 atm, which proved that the calculation results according to the recommended formulae were sufficiently corroborated by the tests. There are 7 figures.

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TOKAR', I.Ya., kand.tekhn.nauk; DAN'KO, V.G., inzh.; TENETKO, N.I., inzh.; PETROVA, A.A., inzh.; KRASNER, A.G., inzh.

Hydrostatic rise of shafts in radial bearings. Vest. elektroprom. 33 no.7:57-60 Jl '62. (MIRA 15:11)
(Turbogenerators) (Bearings (Machinery))

TENETKO, N.I.; TOKAR', I.Ya., kand.tekhn.nauk; DAN'KO, V.G., inzh.; KRIVONOS, A.F.

Calculating hydrostatic floating of shafts in supporting bearings. Vest.mashinostr. 42 no.6:14-17 Je '62. (MIRA 15:6)
(Bearings (Machinery)) (Shafting)

TOKAR', I.Ya., kand.tekhn.nauk

Problem concerning the choice of the size of the front seals of turbogenerator rotors. Vest.elektroprom. 32 no.2:24-28 F '61. (MIRA 15:5)

(Turbogenerators)

S/110/60/000/011/004/012
E194/E484

AUTHORS: D'yachenko, S.K., Candidate of Technical Sciences, Bogdanov, O.I., Candidate of Technical Sciences, Dovzhuk, A.Ya., Engineer and Tokar', I.Ya., Engineer

TITLE: An Experimental Study of Annular (Hydrogen) Seals on a Turbo-Generator Shaft Having a Conical Bearing Surface

PERIODICAL: Vestnik elektropromyshlennosti, 1960, No.11, pp.41-43

TEXT: The bearing surfaces of annular seals usually consist of separate fixed sectors and contain surfaces that slope to the direction of motion and also areas parallel to the thrust block, see Fig.1. These shapes have to be made by hand which is rather inaccurate. An article by Tokar' in Vestnik elektropromyshlennosti No.6, 1960 described annular seals with bearing surface of conical shape, that is with a wider gap at the small diameter than at the large, see Fig.2. The previous work showed that although there is no slope in the direction of the motion, the conical oil film can withstand considerable loads. The object of the present article was to check the correctness of the calculations given in the previous article and to establish the reliability of the seal. The Elektrotyazhmash Works built a rig to test the glands for a

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S/110/60/000/011/004/012
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An Experimental Study of Annular (Hydrogen) Seals on a Turbo-Generator Shaft Having a Conical Bearing Surface

turbo-alternator of 200 MW, the main dimensions are given. The measurement procedure is described. The oil flow and the temperature were measured. The oil pressure was measured at inlet to the seal and in the circular channel, see Fig.2. The induction method with U-shaped transformer type transducers was used to measure the minimum oil film thickness, the arrangement is shown in Fig.3. The circuit used to measure the oil film thickness is shown in Fig.4. The method of measurement is independent of the temperature of the medium surrounding the inductive transducers. A calibration curve for the instrument is given in Fig.5. It will be seen that the sensitivity of the circuit is about 1 micron in the thickness range up to 30 microns and 2.5 microns in the range up to 150 microns. The main tests were made with a gas pressure inside the frame of 3 atm with a spring pressure of 100 kg and the results are tabulated. The minimum film thickness with a gas (hydrogen) pressure of 3.2 kg/cm$^2$ and oil pressure of 3.6 kg/cm$^2$ was 0.12 mm. The agreement between calculated and experimental values is satisfactory and

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accordingly the formulae given in the previous article are recommended for practical use. There are 5 figures, 1 table and 2 Soviet references.

SUBMITTED: May 25, 1960

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D'YACHENKO, S.K., kand.tekhn.nauk; BOGDANOV, O.I., kand.tekhn.nauk; DOVZHUK, A.Ya., inzh.; TOKAR', I.Ya., inzh.

Experimental study of axle face packing in a turgogenerator with a conical carrying surface. Vest. elektroprom. 31 no.11:41-43 N '60. (MIRA 13:12)

(Turbogenerators) (Packing (Mechanical engineering))

TOKAR', I.Ya., inzh.

End packings of a turbogenerator shaft with conical carring surface.
Vest.elektroprom. 31 no.6:60-63 Je '60. (MIRA 13:7)
(Turbogenerators)
(Packing (Mecahnical engineering)

TOKAR, I. YA, Cand Tech Sci — (diss) "Investigation of the end packings of the turbine generator rotor," Kharkov, 1960,21 pp, 150 cop. (Kharkov Polytechnical Institute im V, I. Lenin) (KL, 42-60, 115)

SOV/110-59-8-11/24.

AUTHOR: Tokar', I. Ya, Engineer.

TITLE: The Design of (Hydrogen Sealing) Glands on a Turbo-generator Shaft.

PERIODICAL: Vestnik elektropromyshlennosti 1959, Nr 8, pp 46-49, (USSR)

ABSTRACT: To secure higher alternator ratings the pressure of hydrogen inside them is increased, the loadings on the rotor glands are raised and the oil film thicknesses are reduced. A clear understanding is required of the pressure distribution and other characteristics of the glands. The oil-hydrogen seals of turbo-generators operate like thrust bearings but the methods of thrust bearing design cannot be applied to the glands because of important differences in the construction, which are briefly described with reference to the diagram in Fig 1. Therefore, the pressure distribution on the bearing surfaces is calculated by the method of finite differences, as in equation (1), which can give a close approximate solution of Reynolds' equation for the lubricant layer. For better application of the

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method of finite differences this equation is rewritten in the form of equation (2). In determining the pressure distribution and oil flow a coordinate grid is applied to the bearing surface, as shown in Fig 2, and then equation (2) is replaced by a system of linear equations. The method of calculating the oil pressure and the load-carrying capacity of the bearing surface is then explained. The minimum thickness of oil layer is determined for the working load by means of the curve in Fig 3, which is a dimensionless relationship obtained during the design of glands for a 200 MW turbo-alternator. Formulae are then given for the oil flow, the power loss in the gland and the heating of the oil. The application of the theories of dimensions and of similarity to the design of the glands is briefly discussed. Using the method of finite differences, several shapes of bearing surface may be considered and the best one chosen in respect of reliability of oil film thickness, flow and the temperature rise. This shape of gland may then be used for a series of turbo-generators by

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the application of formulae (15) and (16). The accuracy of the calculation was checked by tests on the glands of a 200 MW turbo-generator. Various experimental and calculated characteristics are compared in a Table, and agreement is stated to be satisfactory. There are 4 figures, 1 table and 3 Soviet references.

SUBMITTED: February 2, 1959.

Card 3/3

TOKAR', I.Ya. (Khar'kov); CHERNYAKOV, P.S. (Khar'kov)

Problem of the lubrication of friction bearings having an axisymmetric shape of the carrying surface. Izv. AN SSSR Otd. tekh. nauk. Mekh. i mashinostr. no.2:149-152 Mr-Ap '63. (MIRA 16:6)

(Bearings(Machinery)—Lubrication)

TOKAR', I.Ya., kand. tekhn. nauk; BYALYY, B.I., inzh.

Designing thrust bearings and end sealings of rotors of turbogenerators. Vest. mashinostr. 44 no.11:18-23 N '64
(MIRA 18:2)

TOKAR, J.

Yugoslavia (430)

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(MIRA 18:3)

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Rubber Abstracts

Vulcanised Natural Rubber

**Improving the quality of cotton-paper endless driving belts by vulcanisation.** M. E. [illegible] and A. M. VLYNTESKY (Stanki i Instrument, 1949, 20, No. 7, 26; Translated Contents Lists of Russian Periodicals, 1949, No. 5, 55). 66122.5

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